

ONLINE EDUCATION TO IMPROVE WORKFORCE SKILLS: THE EXPERIENCE IN THE UNITED STATES

By

ROBERT W. ROBERTSON *

CARLOS TASSO E. AQUINO **

** Professor, College of Business, Columbia Southern University, Orange Beach, Alabama, USA.*

*** Senior Executive Director, Center of Excellence in Diversity and Inclusion, Argosy University, Tampa, Florida, USA*

ABSTRACT

The forces of globalization and technological advances are driving a need for skilled workers. In many countries, there is a "skill gap" that must be acknowledged. Individuals must increasingly embrace lifelong learning to remain competitive in turbulent times. This paper provides an introduction to the skill's gap issue. In addition, the paper assesses the need for skilled workers in the United States. In many instances, this need for skilled workers is being addressed by using online technology and training.

Keywords: Workforce, Skills Gap, Global Competitiveness, On-Line Education, Workforce Training, Lifelong Learning.

INTRODUCTION

There is no doubt that we live in turbulent times. Globalization, demographics and technology are three forces driving considerable change in our lives as individuals, in our workplace environments, and in society generally. A key skill in the 21st century is being able to understand and adapt to the pervasive changes.

In particular, globalization has driven more competition in the environment as firms look to maximize profits and grow their businesses without regard to political boundaries. In today's hyper-competitive environment, companies look to take advantage of any opportunity to improve their position. Similarly, technology has enabled firms to bridge distances and source resources from anywhere in the world as well as selling products and services globally. Together, these trends of globalization and technology mean that companies must strive to assess their current strengths, weaknesses, opportunities, and threats on a regular basis and combine them to develop sustainable and competitive strategies. These strategies often require rapid changes, requiring companies to be flexible and responsive to meet the "new norm" while remaining viable. One key area that demands attention of companies on a regular basis is related to the recruitment, training, and development of their most important asset-their people.

In general, the workforce in many developed countries is aging dramatically as baby boomers move towards retirement and birth rates continue to decline. Further, the increasing use of technology together with other workforce skills required by companies presents a problem not only for the number of individuals required in the workforce, but also for the education and training of that workforce. Finally, while distance has a much less important impact on business than it did in the past, the economic costs of transportation and personnel movement are increasing while the social and political costs are becoming better known. Employees and firms are more footloose and easily able to move to more attractive economic opportunities and talented personnel that may exist elsewhere.

Scope of the Study

This paper explores the current situation with respect to workforce skills in the US as an important component of the competitiveness of the American economy at a time of significantly increased global competition and economic insecurity in many markets. Specifically, the paper provides an overview of the perceived skills gap in the US labor force and identifies ways that this gap can be closed notably using technology such as online learning. Generally, online learning has seen remarkable growth both globally and in the US. This paper links the growth in online learning to the

specific needs of the workplace in today's turbulent economy.

The Competitive Global Economy

During the past thirty years, many developing countries have continued to industrialization and urbanization. This period has witnessed the gradual development of a global labor market. In addition, this period has seen an increase in the competition between nations to enhance their productivity and resultant economies. These changes can be seen in the The Global Competitiveness Report 2014-2015 (Schwab, 2014). This is an annual report that assesses the competitiveness landscape of 144 economies. Specifically, it outlines the key drivers of the productivity and prosperity of these countries. Competitiveness is defined as "the set of institutions, policies and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be earned by an economy" (Schwab, 2014, p.4). Fundamentally, the World Economic Forum (Schwab, 2014) suggests a high competitiveness ranking indicates an economy that develops, attracts, and retains educated and informed talent and is more likely to innovate and introduce new and higher value-added products and services. As developing nations began to enter the marketplace and thereby began to compete in global markets, the workforce expanded. "As more than one billion people entered the labor force, a massive movement from 'farm to factory' sharply accelerated growth of productivity and per capita GDP in China and other traditionally rural nations, helping to bring hundreds of millions of people out of poverty" (Dobbs, R., Madgaodar, A., Barton, D., Labaye, E., Manyika, J., Roxburgh, C., Lund, S., & Madhav, S., 2012). In addition, with the entry of new nations and firms into the marketplace, competition increased necessitating firms to continue to look for ways to increase productivity and profitability. In particular, many companies in the developed economies used technology and outsourcing to reduce labor costs and boost their ROI's. The reduction in labor costs by outsourcing took jobs offshore which increased the firm's bottom line as well as the economy of the developing nation. Today, the success of "off-shoring jobs" contributes to simultaneous benefit

and strain the global labor force.

The benefit includes the rapid development that results from the movement of technology and practices from the developed to the developing world. The strain includes the demand for high-skill labor growing faster than supply, while demand for low-skill labor remains weak. But the strain is not a problem only for the developed nations. The McKinsey Global Institute (MGI) finds these trends gathering force and spreading to China and other developing economies, as the global labor force approaches 3.5 billion in 2030 (Dobbs, et al. 2012). Based on current trends in population, education, and labor demand, the report projects that by 2020 the global economy could face the following hurdles:

- "38 million to 40 million fewer workers with tertiary education (college or postgraduate degrees) than employers will need, or 13 percent of the demand for such workers.
- 45 million too few workers with secondary education in developing economies, or 15 percent of the demand for such workers.
- 90 million to 95 million more low-skill workers (those without college training in advanced economies or without even secondary education in developing economies) than employers will need, or 11 percent oversupply of such workers" (Dobbs, et al. 2012).

When considering these predictions, firms are responding to trade liberalization, globalization, and ever improving technology within a more competitive economic environment. Firms are reacting by looking for solutions to manage these changes. Some of the solutions include matching employee skills to the growing demand for specific skill sets and educational attainment in specific areas both geographically and in terms of specific industries.

The US Labor Force

In the United States, there are already signs that these emerging global issues are emerging. In many sectors, there are concerns about competitiveness and a growing employee skill gap (Gurdjian & Triebel, 2009). In part, the skill gap has been cited as a reason for the continuing slow

economic recovery from the Global Financial Crisis of 2007, although there is considerable debate as to the causality (Buning Cantrell, Marshall, & Smith, 2011; Bybee, 2013). Instead, The International Labor Organization recently released the 2014 Global Employment Trends report that indicates despite the number of countries where the economy is recovering, the number of unemployed is not decreasing. Indeed, many economists have dubbed the economy as the “jobless recovery.” There is some support for this assertion. As illustrated in Figure 1, there is a strong correlation between level of education in the US and employment. The National Center for Education Statistics notes that “in 2013, the unemployment rate for those with at least a Bachelor’s degree was lower than the rates for those with lower levels of educational attainment. During the most recent economic recession (2008 through 2010), the unemployment rate increased less for those who had at least a bachelor’s degree than for those who had less than a bachelor’s degree” (National Center for Education Statistics, 2014).

These data suggest a fundamental shift from the historical norms of the workplace. During the past fifty years or more the workforce skills required of employees had remained relatively stable. It is only since the Global Financial Crisis in 2007 that we have seen dramatic shifts in the skill sets being required of employees in the United States (Figure 1).

Long-Term Unemployed Within Each Education Category, Quarter 1, 2008, 2011, 2012
Percentage of Total Unemployed

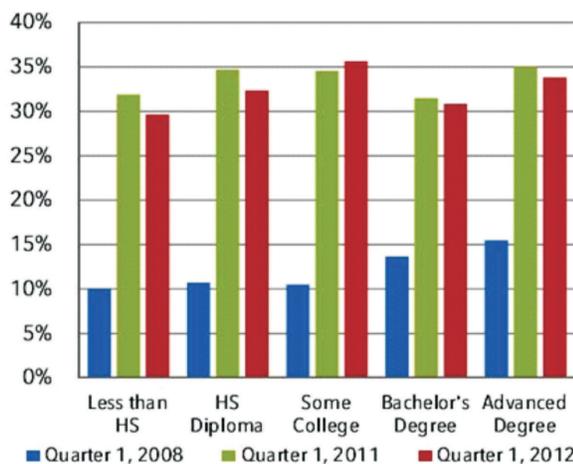


Figure 1. Correlation Between Levels of Education and Employment in United States

In addition, there are many sectors reporting a gap in the skills needed to remain globally competitive. For example, “American manufacturers are increasingly finding that prospective workers do not have the skill set required to perform necessary job functions, such as basic math and computer abilities. The so-called ‘skills gap,’ if unresolved, could compromise manufacturers’ ability to stay competitive, according to some industry leaders” (Peralta, 2014). Indeed, in a 2011 survey, of 1,123 manufacturing companies, the Manufacturing Institute reports that:

- 67% reported “a moderate to severe shortage of available, qualified workers,”
- 5% of current jobs are unfilled due to a lack of capable candidates (Manufacturing Institute, 2011, p.1)

Further, they report that 600,000 well-paying jobs will remain unfilled in the face of staggering unemployment rates (Manufacturing Institute, 2011, p.2), demonstrating an unemployment paradox that is created by the surplus of jobs that require specifically trained skill sets for which the population is not trained or educated to fulfill. In addition, Peralta notes that, “the cause of the gap is multifaceted. Manufacturing activity has increased in the U.S. for nearly a year and with it grows businesses’ need for skilled workers. Exacerbating the shortage is the wave of retiring baby boomers, those Americans born between 1946 and 1964” (Peralta, 2014). To address this gap there are calls for increased and fast tracked immigration to allow foreign workers the opportunity to work in the US. Also, there are many firms aggressively adding training as important in developing their own workforce. Increasingly, the development of this type of training has included the development and use of online education options.

Online Education as a Tool to Address the Skills Gap

There has been significantly increased interest in online as a delivery system providing for increased accessibility to education in a more efficient and user friendly manner (Allen & Seaman, 2014). In particular, the report notes that, an increasing number of academic institutions (approximately 60%) see that online education represent a critical part of their plans.

Allen & Seaman (2014) indicated Online education in their study as it is critical to the long-term strategy of an institution

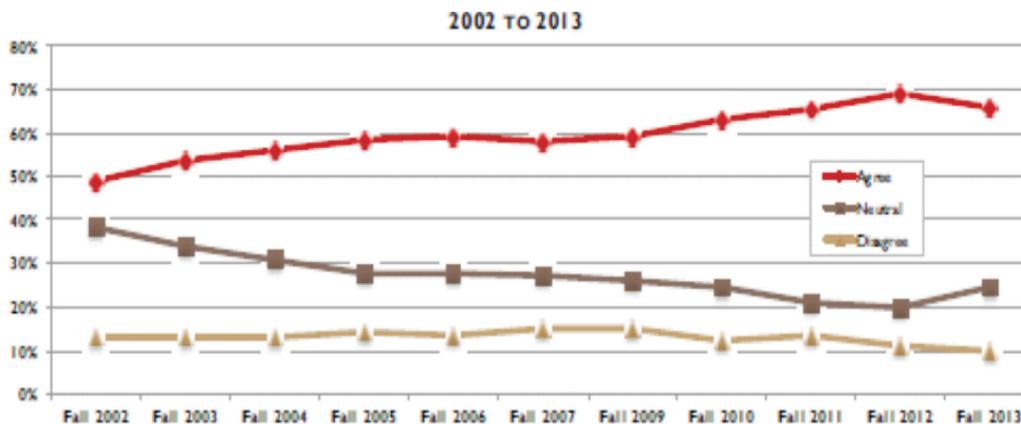


Figure 2. Grade Change: Tracking Online Education in the United States (Allen and Seaman, 2014).

(Figure 2).

More recently, there has been considerable public attention to the concept advanced by Coursera and others to develop and provide Massive Open Online Courses (MOOC's) at no or little cost to students. The courses are developed by a consortium of more than 85 universities, primarily based in the United States. For the most part, these courses are in English; however there are alternate language courses being developed and offered as well as translations of some of the existing courses available for non-Anglophones. In addition, it is important to note that, some of the courses do not carry academic credit. However, increasingly universities albeit small in number, are now opening pathways that will enable some MOOC's to be taken for university credit, under specific qualifications (Yuan & Powell, 2013). Increasingly, it can be seen that these types of courses (MOOC's) play a role in bridging the skills gap.

For example, Puri, (2013) notes that, "90% of CEOs will either maintain or increase their training budgets over the next year. But the solution might actually be simpler and significantly more cost-effective, even free. Just look to today's emerging tech trends in education." When discussing free or cost-effective higher education, undoubtedly MOOCs are one of the considerations.

In general, all online education affords flexibility, particularly for those individuals already in the workplace. The advantages of education include gaining critical skills to be used in specific employment settings as well as in preparation for advancement or promotion. Online

education empowers employees to package critical skills on an "as needed" basis, facilitating the education that most applies to the individual student at the time that it is required. Traditional education has a pre-established pattern and flow of courses that often require students to study courses not of direct interest and/or applicability for them. While the liberal arts education enhances the overall education of the global citizen, the costs of this education often cannot be recouped by the individual, denying the individual the ability to engage in further education. Online education can be more easily tailored to meet the immediate demands of employees and employers. Further, online education enables students to talk across great distances, facilitating their familiarization with different cultures, traditions, and situations. In an increasingly global world, this familiarization enhances companies' abilities to complete transactions across national and ethnic boundaries.

Conclusion

Overall, there are clearly major changes within business that are requiring a different set of workforce skills. These "new" skills are more technologically driven, but they also include emotional intelligence skills and conceptual skills. Business is demanding that employees have these skills or they will simply find alternatives that are better suited to their immediate needs. These alternatives are not subject to geographic constraints as was the case previously. Businesses will find geographic locations anywhere on the globe. As a result, the competition for trained employees is far more intense in this knowledge based economy

(Yashchin, 2014).

Online education is a way to deliver real time training on an as required basis. Online education is growing very quickly in the United States as it represents a delivery mode sought after by employers and employees. Speed of delivery and being able to target specific training to specific needs are the main drivers of the increased use of online education to improve workforce skills.

References

- [1]. Allen, I.E. & Seaman, J. (2014). "Grade change: Tracking online education in the United States". United States: Babson Survey Research Group and Quahog Research Group, LLC.
- [2]. Buning, N., Cantrell S.M., Marshall, B.T., & Smith, D. (2011). "Solving the skills crisis". *Accenture*. Retrieved from <http://www.accenture.com/us-en/outlook/Pages/outlook-journal-2011-solving-skills-crisis-talent.aspx>
- [3]. Bybee, R. (2013). "The 'skills gap' myth". *The Progressive*. Retrieved from <http://www.progressive.org/skills-gap-myth>
- [4]. Dobbs, R., Madgaodar, A., Barton, D., Labaye, E., Manyika, J., Roxburgh, C., Lund, S., & Madhav, S., (2012). "The world at work: Jobs, pay, and skills for 3.5 billion people". *Insights & Publications, McKinsey & Company*. Retrieved from http://www.mckinsey.com/insights/employment_and_growth/the_world_at_work
- [5]. Gurdjian, P. & Triebel, O. (2009). "Identifying employee skill gaps". *Insights & Publications, McKinsey Quarterly*. Retrieved from http://www.mckinsey.com/insights/organization/identifying_employee_skill_gaps
- [6]. International Labor Organization, Organization for Economic Cooperation and Development, World Bank Group (2014). *G20 Labour Markets: Outlook, Key Challenges, and Policy Responses*. Retrieved from http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_305421.pdf
- [7]. Manufacturing Institute & Deloitte, (2011). "Boiling point? The skills gap in US manufacturing". Manufacturing Institute, National Center for Manufacturing Research. Retrieved from <http://www.themanufacturinginstitute.org/~media/A07730B2A798437D98501E798C2E13AA.ashx>
- [8]. McKinsey Global Institute, (2012). "Help wanted: The future of work in advanced economies". *McKinsey & Company*. Retrieved from http://www.mckinsey.com/insights/employment_and_growth/future_of_work_in_advanced_economies
- [9]. National Center for Education Statistics, (2014). "Labor force participation rates by educational attainment". Institute of Education sciences: National Center for Education Statistics. Retrieved from http://nces.ed.gov/programs/coe/indicator_cbc.asp
- [10]. Peralta, K. (2014). "US manufacturers say skills gap could compromise competitiveness". *US News*. Retrieved from <http://www.usnews.com/news/articles/2014/05/07/us-manufacturers-say-skills-gap-could-compromise-competitiveness>
- [11]. Puri, R., (2013). "How alternate education can bridge the skills gap". *Forbes*. Retrieved from <http://www.forbes.com/sites/bmoharrisbank/2013/02/05/how-alternative-education-can-help-bridge-the-skills-gap/>
- [12]. Schwab, K., (2014). "The Global Competitiveness Report 2014-2015". *World Economic Forum*. Retrieved from http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf
- [13]. Yashchin, A., (2014). "Redefining Education to Close the Workforce Skills Gap". *Huffington Post*. Retrieved from http://www.huffingtonpost.com/avi-yashchin/redefining-education-to-c_b_4676818.html
- [14]. Yuan, L. & Powell, S. (2013). "MOOCS and open education: Implications for higher education". A white paper. UK: CETIS

ABOUT THE AUTHORS

Dr. Robert W. Robertson is a Professor of Business at Columbia Southern University in Orange Beach, Alabama, USA. In addition, he is a Visiting Scholar at the Faculty of Economics, University of Ljubljana, Slovenia. He has more than twenty five years of experience leading award winning organizations in Canada, Kazakhstan and the United States. In 2016, Dr. Robertson was named a Fulbright Scholar by the United States Department of State; and, an Emerging Leader in the Americas by the Government of Canada.



Dr. Carlos Tasso Eira De Aquino is the Senior Executive Director for the Center of Excellence in Diversity and Inclusion at Argosy University, Tampa, Florida, USA. He is an accomplished Senior Executive and Educator combining over 15+ years of experience in leadership and scholarship in Business, Education, IT, and Engineering with a PhD and two Post-Docs. In his career, as an executive, he has been strategically building, managing and guiding diverse teams to solve complex, systemic problems. As an educator, he has taught, developed and supervised, and published relevant research and scholarship. Along his career Dr. Aquino accumulated achievements and recognition as Executive-Director, Senior Director, Project Manager, Provost, Dean of Business, Assistant Dean of Accreditation, among other capacities in organizations in the USA and abroad, with followers that encompassed a clear diversity of cultures.

